

Thursday, 11/24/2005 1:39:25 PM

User: Linda Lacelle

## Process Sheet

Split - 32

Customer	: CU-DAR001 Dart Helicopters Services	Drawing Name	: FWD TUBE ASSEMBLY
Job Number	: 24865		
Estimate Number	: 10467		
P.O. Number	: N/A	Part Number	: D3391021
This Issue	: 11/24/2005 S.O. No. : N/A	Drawing Number	: D3391 REV B
Prsht Rev.	: NC	Project Number	: N/A
First Issue	: N/A Type : MACHINED PARTS	Drawing Revision	: B
Previous Run	: 24865	Material	: N/A
Written By	: <u>SEE COMMENT BELOW</u>	Due Date	: 12/20/2005 Qty: 5 Um: Each
Checked & Approved By	: <u>SEE COMMENT BELOW</u>		
Comment	: Est. A 05.09.13 New issue KJ/JLM		

## Additional Product

Job Number:



Seq. #: Machine Or Operation: Description :

1.0 D6013047 SKIDTUBE MAT'L



Comment: Qty.: 1.0000 Each(s)/Unit Total: 5.0000 Each(s)

SKIDTUBE MAT'L

Pick:

Qty	Part Number	Description	Batch
1	D6013-047	Extrusion	323935

m 05/11/28 5

2.0 LANDING GEAR 1 Band saw LANDING GEAR RESOURCE 1



Comment: LANDING GEAR RESOURCE 1 Band saw

Cut extrusion to 46.52 +0.010 -0.020

m 05/11/28 5

3.0 BRAKE NC NC BRAKE



Comment: NC BRAKE

Bend as per Dwg D3391

DP/12 05-12-15

(10)

4.0 QC5 INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

Jas 12-23 10

5.0 HAAS1 HAAS CNC VERTICAL MACHINING #1



Comment: HAAS CNC VERTICAL MACHINING #1

1-Machine as per Folio FA590 Rev. C & Dwg D3391 Rev. C  
Identify as D3391-1

2-Deburr

SD 06.01.05

9 (PTD)

# Process Sheet

Order: CU-DAR001 Dart Helicopters Services

Drawing Name: FWD TUBE ASSEMBLY

Job Number: 24865

Part Number: D3391021

Job Number:



Seq. #:	Machine Or Operation:	Description :								
6.0	QC2	INSPECT PARTS AS THEY COME OFF MACHINE								
<p>Comment: INSPECT PARTS AS THEY COME OFF MACHINE</p>		<p>SA 06.01.05 (10)</p>								
7.0	QC8	SECOND CHECK								
<p>Comment: SECOND CHECK</p>		<p>206-01-19</p>								
8.0	LANDING GEAR 1	LANDING GEAR RESOURCE 1								
<p>Comment: LANDING GEAR RESOURCE 1</p> <p>Drill and c/sink float bag holes as per Dwg D3391 using DT8798 DP06-1-7 (2)</p> <p>Drill wearplate holes as per Dwg D3391 NP06-1-7 (2)</p> <p>Deburr DP06-1-7 (2)</p>										
9.0	HAND FINISHING1	HAND FINISHING RESOURCE #1								
<p>Comment: HAND FINISHING RESOURCE #1</p> <p>Acid etch and Alodine as per QSI 005 4.1 DP06-1-7 (2)</p>										
10.0	POWDER COATING	POWDER COATING								
<p>Comment: POWDER COATING</p> <p>Powder Coat White Gloss (Ref: 4.3.5.1) as per QSI 005 4.3</p>		<p>FC 06 01 25</p>								
11.0	QC3	INSPECT POWDER COAT/CHEMICAL CONVERSION								
<p>Comment: INSPECT POWDER COAT/CHEMICAL CONVERSION</p>		<p>MM 06 01 25</p>								
12.0	D3401041	Tow Cap Assembly								
<p>Comment: Qty.: 1.0000 Each(s)/Unit Total : 5.0000 Each(s)</p> <p>Tow Cap Assembly</p> <p>Pick:</p> <table border="1"> <thead> <tr> <th>Qty</th> <th>Part Number</th> <th>Description</th> <th>Batch</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>D3401-041</td> <td>Tow Cap</td> <td>24487</td> </tr> </tbody> </table>		Qty	Part Number	Description	Batch	1	D3401-041	Tow Cap	24487	<p>FC 06 01 25</p>
Qty	Part Number	Description	Batch							
1	D3401-041	Tow Cap	24487							
13.0	AN3C4A	Bolt								
<p>Comment: Qty.: 4.0000 Each(s)/Unit Total : 20.0000 Each(s)</p> <p>Bolt</p> <p>Pick:</p>		<p>FC 06 01 25</p>								

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Linda Lacelle

## Process Sheet

Order: CU-DAR001 Dart Helicopters Services

Drawing Name: FWD TUBE ASSEMBLY

Job Number: 24865

Part Number: D3391021

Job Number:



Seq. #:

Machine Or Operation:

Description :

Qty	Part Number	Description	Batch
4	AN3C4A	Bolt	m1a185

FC 06 01 25

14.0

NAS1330C3KB166

Rivnut



Comment: Qty.: 24.0000 Each(s)/Unit Total: 120.0000 Each(s)

Rivnut

Pick:

Qty	Part Number	Description	Batch
24	NAS1330C3KB166	Insert	m19354

FC 06 01 25

15.0

NAS1515H3

Washer



Comment: Qty.: 4.0000 Each(s)/Unit Total: 20.0000 Each(s)

Washer

Pick:

Qty	Part Number	Description	Batch
4	NAS1515H3L	Washer	m17450

FC 06 01 25

16.0

SMALL FAB 1

SMALL & MEDIUM FAB RESOURCE 1



Comment: SMALL & MEDIUM FAB RESOURCE 1

Install inserts and Tow Cap as per Dwg D3391

Identify as D3391-021

FC 06 01 25  
m1 06 01 31

17.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

06-02-02 2

18.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Identify and Stock

Location:

19.0

DC

DOCUMENT CONTROL



Comment: DOCUMENT CONTROL

Inspection Level 21

545 06/02/07 (2)

06/02/06

Job Completion



4 AN960C10L WASHER m18822

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes ☒ No ☐ DQA: SD Date: 06/01/06  
 QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			
06/01/17	5?	1. the dim. 3.580 was 3.566 dim 3.300 was 3.273 dim 1.429 was 1.400						
	✓ *	2. the dim 3.580 was 3.595 dim 1.429 was 1.390 <del>dim 4.250 was 4.280</del>	<u>SD</u> 07/17	Acceptable see E-mail		<u>206-01-18</u>	<u>SD</u> 07/17	<u>206-01-18</u>
06/01/17	5?	3. the dim 3.300 was 3.282 dim 3.580 was 3.556 <del>dim 4.250 was 4.280</del>						
	✓ 3	4. the dim 1.429 was 1.390 <del>dim 3.580 was 3.605</del> <del>dim 4.250 was 4.280</del>	<u>SD</u> 07/17	Acceptable see Email		<u>206-01-18</u>	<u>SD</u> 07/17	<u>206-01-18</u>
06/01/17	5?	5. the dim 3.300 was 3.320 dim 1.429 was 1.405 dim 3.580 was 3.626 <del>dim 4.250 was 4.280</del>						

NOTE: Date & initial all entries

3.300 is 3.282  
3.580 is 3.556

00000000

# Job Costing Report

Dart Aerospace Ltd.  
Hawkesbury

Nov 17, 2005  
03:30 pm

Work Order No	: 0024865	Department Code:	
Project Name	: D3391-021	Burden Flags	: NNNNNNNN
Project For	: WK550	WO Status	: Open
Work Order Type	: Main	Invoice State	: Not Invoiced
Main WO Number	:	Invoice Date	:
House Part Number	: D3391-021	Invoice Number	:
Description	: Fwd Tube Assembly	Invoice Amount	: 0.00
Manufactured	: Yes		
Amount Req'd	: 5	Order Entry No	:
Amount Done	: 0	OE Value	: 0.00
Start Date	: 11-17-05		
Est Finish Date	: 12-20-05	Est Margin	: 0.000%
Act Finish Date	:	Actual Margin	: 0.000%
Drawings Req'd	: No		
Ok for Approval	:		
Approval Rec'd	:	\$0 Posted to Finished Goods	

	Estimated	Actual	Var. %	Posted	To Post
Material Cost	: 0.00	0.00	0.00	0.00	0.00
Engineering Hours	: 0.00	0.00	0.00		
Engineering Cost	: 0.00	0.00	0.00	0.00	0.00
Production Hours	: 0.00	0.00	0.00		
Production Cost	: 0.00	0.00	0.00	0.00	0.00
Packaging Hours	: 0.00	0.00	0.00		
Packaging Cost	: 0.00	0.00	0.00	0.00	0.00
OverHead Hours	: 0.00	0.00	0.00		
OverHead Cost	: 0.00	0.00	0.00	0.00	0.00
CNC Hours	: 0.00	0.00	0.00		
CNC	: 0.00	0.00	0.00	0.00	0.00
Misc. Hours	: 0.00	0.00	0.00		
Misc.	: 0.00	0.00	0.00	0.00	0.00
Burden	: 0.00	0.00	0.00		
Total Cost	: 0.00	0.00	0.00		
Margin	: 0.000	0.000			
Selling Cost	: 0.00	0.00			

	Estimated	Actual
Labour Hrs/Amount Done	: 0.00	0.00
Profits/(Loss)	: 0.00	0.00

Peter Hum

From: David Shepherd [davids@dartaero.com]  
Sent: Tuesday, January 03, 2006 9:58 AM  
To: Peter Hum  
Cc: Bill Beckett  
Subject: Re: 412 float skidtube extension saddle holes

I think this is acceptable.

David

----- Original Message -----

From: "Peter Hum" <phum@dartaero.com>  
To: "David Shepherd (E-mail)" <davids@dartaero.com>  
Cc: "Bill Beckett (E-mail)" <billb@dartaero.com>  
Sent: Tuesday, January 03, 2006 7:03 AM  
Subject: 412 float skidtube extension saddle holes

> Hi David,  
>  
> Bill and I recently opened up an aft tube extension saddle holes to 0.454  
> diameter. The outer tube (6061), saddles, and bushings have remained the  
> same size.  
>  
> Opening the holes allowed better fit for the bushings and bolts to slide  
> through.  
>  
> Its important to remember that we haven't changed the size of the holes of  
> the saddle, outer tube (6061), and diameter of the bushings. Therefore,  
> under prepared landing surface conditions, the bearing loads have not  
> changed in comparison to our standard D205-634 non-float 205 skidtube.  
>  
> David, I am looking for your approval to open the fwd and aft tube  
extension  
> saddle and ground handling holes to 0.454 in diameter.  
>  
> Thanks  
>  
> Peter  
>  
>

Peter Hum

From: David Shepherd [davids@dartaero.com]  
Sent: Tuesday, January 17, 2006 3:15 PM  
To: Peter Hum  
Subject: Re: D3391-1 FWD TUBE DEVIATIONS

Assuming that this part fits with the middle tube it mates with, the deviations listed below are acceptable.

David

----- Original Message -----

From: "Peter Hum" <phum@dartaero.com>  
To: "David Shepherd (E-mail)" <davids@dartaero.com>  
Sent: Tuesday, January 17, 2006 1:04 PM  
Subject: D3391-1 FWD TUBE DEVIATIONS

> David,  
>  
> In manufacturing the fwd tube, there have been tubes that are out of  
> tolerance. The dimension 3.580" is actually 3.595" and the 1.429"  
dimension  
> is 1.390" as shown in the attached sketch. The tolerance of the 1.429"  
> dimension was previously changed to (+0.000,-0.030). In both dimensions,  
the  
> end result is more material. Are these deviations acceptable?  
>  
> Peter Hum  
> Mechanical Designer  
>  
> DART Aerospace Ltd.  
> Email...phum@dartaero.com  
> Phone...613-632-3336  
> Fax.....613-632-4443  
>  
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